"ANALYSIS ON THE IMPACT OF HARNESS AND INTERVAL TRAINING WITH EARTHING ON PERFORMANCE OF ATHLETES"

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INTRODUCTION

Sports within the gift world have become very competitive. It's not the mere participation or follow that brings out success to a private. Therefore, sports life is stricken by numerous factors like physiology, biomechanics, sports training, medical specialty, social science and science etcetera. All the coaches, trainers, physical academic personals and doctors do their best to enhance the performance of the players of their country. Jock players of all the countries also are making an attempt arduous to bring laurels, medals for his or her countries in International competitions.

Athletic performance has dramatically progressed over the past few years. Performance levels inconceivable before square measure currently commonplace, and also the range of athletes capable of outstanding results are increasing. One issue is that athletics may be a difficult field, and intense motivation has inspired long, arduous hours of labor. Also, employment has become a lot of refined, part from the help of sport specialists and scientists. A broader base of information regarding athletes currently exists, that is mirrored in training methodology. **Bompa, 1999**.

Sports' training is a basic preparation for better performance through physical exercise. It is based on scientific principles of aiming education and performance enhancement. Sports activity consists of motor movement, action and their success depends to a great extent on how correctly they are performed. Techniques of training and improvements of tactical efficiency play a vital role in a training process.

The main components which influence the physical performance of an athlete are strength, agility, endurance, speed, flexibility and coordination. Action potential depends on natural abilities and the same time fundamental act as foundation for excellence.

Physical fitness is the human body what fine tuning is to an engine. It enables us to perform up to our potential. Fitness can be described as a condition that helps us for better look, pleasant feel and do our best. More specifically, it is "the ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure time activities and meeting emergency demands. It is

the ability to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is a major basis for good health and well being"

Physical fitness involves the performance of the heart and lungs, and the muscles of the body. And since what we do with our bodies also effects what we can do with our minds, fitness influences to some degree qualities such as mental alertness and emotional stability.

HARNESS TRAINING

Harness training or resistance training is for maintaining the body of a runner in an exceedingly correct sprinting type from begins to end throughout a race. The equipment includes base plate means that tailored for reference to the trunk of the runner, head participating means that for participating the sprinter's head, and connecting means that for coupling the pinnacle participating means that with the bottom plate means that therefore on maintain the pinnacle and neck of the runner in an extended forward position relative to the trunk throughout sprinting.

Resistance training has 2 completely different, generally confused which means a lot of broad meaning that refers to any training that uses a resistance to the force of muscle contraction better termed strength training, and elastic or hydraulic resistance, that refers to a selected form of strength training that uses elastic or hydraulic tension to produce this resistance. This text discusses the lot of restricted definition, of elastic / hydraulic resistance training.

For the propose of the study Harness Running could also be outlined united of the training mean during which resistance to be carried by the topic is within the type of dragging weight.

SPEED HARNESS

In virtually each sport, quick, controlled reaction times will play a necessary role within the outcome of a game, and athletes who have enough gracefulness to remain in motion and maintain high speed throughout direction changes can have a definite advantage on the sector or court. Fast stops, starts, and reaction times generally begin with an occasional center of gravity and powerful management over the muscle teams that contribute to hurry. These embody the muscles of the core, hips and quads. Additionally to strength in these muscle teams and an occasional, controlled body position, athletes can have to be compelled to develop a robust sense of balance so as to execute speedy direction shifts while not slippery, falling, or stutter-steps.

The sports training drill incontestable during this video is named the reactive lateral shuffle, and once dead properly, this drill will facilitate athletes be their feet and in restraint throughout speedy changes on the sector. This drill depends on the resistance speed harness, The Reactive Stretch wire that provides each resistance and help as athletes move far from the anchor purpose and so back once more at most rate. Once athletes have worked the speed harness into a daily educational program and developed the lateral speed and management provided by this exercise, they'll notice the results; direction changes on the sector can happen quicker and athletes can keep on top of things and maintain higher balance as game things evolve.

INTERVAL TRAINING

Tom (1982) defined the interval training as a programme of repeated running with a set interval of restful, jogging after each run. The period between run must be long enough to allow the athlete same time to recover from previous run but long enough to afford him complete recovery.

Singh (1991) stated that, "In interval training the work should be done with sufficient speed and duration so that heart rate goes up to 180 beats per minute. After words there should be a recovery period and when the heart beat comes down to 120-130 beats per minute, work should be started again". In continuous method an exercise is done for long time without break or pause. Intensity is low or medium and volume is high in continuous running method. According to Dick (2006), "continuous method stands for steady pace or intensity where the heart rate lies between 130 to 160 beats per minute and duration of running will be over 30 minutes for young athletes".

In interval training method, the work is done relatively at high intensity with interval of incomplete recovery. The continuous running and interval training are the well-established methods which considerably improve the endurance ability (aerobic and anaerobic) of players (Dick, 2006 and Singh, 1991).

Interval training is based on the premise that a greater amount of intense work can be accomplished if the work is interspersed with periods of rest. During an interval - training workout, an individual performs a prescribed amount of work in a specified time for a set number of times. The difficult periods of activity are interspersed with recovery periods so that the individual is physiologically overloaded and becomes fatigued many times in a single training session. As a result, exercisers progressively increase their endurance by increasingly

stressing the cardio-respiratory system.(Novich and Taylor, 1993) The training method consists of two training methods is intensive interval training and an extensive interval method which each has its own distinct characteristics (Rekayasa, Afrianda & Nugroho 2017).

INTENSIVE AND EXTENSIVE TRAINING

Intensive and extensive interval training Aerobic metabolism with low intensity over longer periods denotes extensive training and anaerobic metabolism with high intensity over short period's intensive training. In interval training you run fast over a short distance several times, with a predetermined recovery period, or interval, of slow jogging between the fast runs which develops some anaerobic resistance. The key to this type of training is the recovery interval. The main physiological benefit is the development of heart stretch, adjusting the 9 body to oxygen debt so that a minimum amount of oxygen debt is incurred at race pace. There is a qualitative difference in the type of interval training a long distance runner should do. The fast distance run can range from 100 meters to a mile (1.6 kilometers or four laps of the track) so there are intensive interval training sessions and extensive ones. Intensive interval sessions have shorter distances such as 200 meters run fast, whereas extensive interval sessions are run over 500, 800, 1500 metres.5000 and 1000 meter runners should progress by increasing the number of intervals and reducing the recovery time. In contrast, the 800 and 1500 meter runner should progress by increasing the speed of the fast runs, which may mean reducing the number of runs (Parameswari, & Elayaraja, 2010).

EARTHING

The Earth is like a gigantic battery that contains a natural, subtle electric charge—a special kind of energy present in the ground. Earthing is "connecting to the Earth's natural, negative surface charge by being barefoot outside or in bare skin contact with conductive systems indoors while you sleep, relax, or work." Grounding has many health benefits because going barefoot allows the feet to pick up free electrons that then allegedly course through the human body, detoxifying, cleansing, balancing, harmonizing, and, no doubt, boosting the immune system.

We are bioelectrical beings living on an electrical planet. Our bodies operate electrically. All of our cells transmit multiple frequencies that run our heart, immune system, muscles, and nervous

system. With the exception of humans living in industrialized societies, all living things on our planet are connected to the ground's electrical energy. In industrialized societies, we rarely go barefoot outside or wear natural leather shoes that allow us to absorb the ground's energy. For the last 50 years or so, most people have been wearing plastic soled shoes that act as a barrier to the Earth's energy, insulating them from electrical contact with the Earth.

The concept of earthing, also known as grounding, was initially developed by Clint Ober. Stated in the simplest terms possible, earthing is simply walking barefoot; grounding your body to the Earth As an Anti-Aging Strategy.

The significance of barefoot contact with the earth has been known since ancient times. It was good for the skin to touch the bare earth, and the old people liked to remove their moccasins and walk with their bare feet on the sacred Earth…they sat on the ground with the feeling of being close to a mothering power…the soil was soothing, strengthening, cleansing and healing.
Walking with your feet directly touching the soil allows your body to absorb negative electrons through the Earth, which helps to stabilize daily cortisol rhythm and create a balanced internal bioelectrical environment**.(Mercola)**

EARTHING NEUTRALIZES FREE RADICALS

Free radicals are generated through inflammation, infection, cell damage, trauma, stress, and our toxic environments. They force our immune system to respond to these threats. An active immune system produces more free radicals and soon our body is attempting to put out fires, but it has insufficient resources to do so. Additionally, industrialization and our increasingly technological world have thrown us into a labyrinth of electromagnetic fields, which disrupt the electrical balance of our cells. An abundance of free radicals, instable charges, inflammation and immune activation are responsible for some of our most threatening chronic conditions such as cancer, cardiovascular disease, diabetes, chronic pain syndromes, and autoimmunity.

The earth has an infinite supply of free electrons, so when a person is grounded, those electrons naturally flow between the earth and the body, reducing free radicals and eliminating any static

electrical charge. The reason grounding is so powerful is it reduces and prevents inflammation from occurring in the body, which in turn prevents inflammation-related health disorders.

ANTIOXIDANTS

These electrons could be referred to as nature's biggest antioxidants and help neutralize damaging excess free radicals that can lead to inflammation and disease in the body.

The Earth is a highly electrically-charged object. The surface of the Earth is a huge storehouse of free electrons, which are constantly being replenished by natural phenomenon such as solar radiation, lightning strikes and energy generated from the inner core of the planet. This natural energy emanating from the surface of the Earth keeps the biological machinery of all life running in rhythm and balance. When skin makes contact with the Earth, negative electrons will flow from the place they're abundant (the Earth) to the place where they're in short supply (your body). The electrical potential of the two objects will then equalize. These free electrons are transferred into your body as long as you maintain direct skin contact with the ground. The free negative electrons you get from the Earth neutralize your body's excess positive electrons in much the same way as antioxidant nutrients do.

RECOVERY AND HEALING

Earthing promotes better sleep and all the things associated with faster recovery from day to day activity. People have more energy, less pain, better function, and require less sleep. All these are indications that the body is repairing itself and functioning more efficiently.

For athletes, there is clearly a positive effect on biology, leading to heightened recovery from day-to-day activity that facilitates competing at a higher level. Recovery is everything. Competition and training tear the body down. Without adequate recovery, the body will eventually break down or the person sets himself or herself up for injury. If you can sleep less and respond better, and train harder, which is what we see from Earthing, than the assumption can be made that you are affecting the recovery mechanism and repairing the body better and faster.

Earthing is an indispensible healing and recovery tool, something even beyond significant, for any treatment or recovery regimen as it relates to injury, surgery, and maximum athletic

performance. the greater your body's ability to heal, repair, and regenerate, and operate optimally**.(Dr Jeff Spencer)**

Benefits of Grounding

- Inflammation-related disorders.
- Reduces or eliminates chronic pain.
- Improves sleep in most cases.
- Promotes calmness
- Nervous System and stress hormones.
- Normalizes the body's biological rhythms
- Thins blood and improves blood pressure and flow.
- Relieves muscle tension and headaches.

STATEMENT OF THE PROBLEM

The main purpose of the study is to find out the Analysis and Impact of Harness Training and Interval Training with Earthing on Performance of Athletes.

OBJECTIVE OF THE STUDY

1. The primary goal of the present research is to examine the Effect of Harness Training with Earthing and Interval Training with Earthing on Performance of Athletes.
2. The secondary goal of the research is to find out the influence of Effect of Harness Training with Earthing and Interval Training with Earthing on chosen Physical, Physiological and Psychological Variables of Athletes.

3. Final goal of the research is to promote for the overall fitness development among Athletes by inducing the selected Harness Training with Earthing and Interval Training with Earthing.

HYPOTHESES

1. It is hypothesized that there will be significant effect of Harness Training with Earthing and Interval Training with Earthing on selected physical variables.
2. It is hypothesized that there will be significant effect of Harness Training with Earthing and Interval Training with Earthing on selected physiological variables.
3. It is hypothesized that there will be significant effect of Harness Training with Earthing and Interval Training with Earthing on selected psychological variables.
4. It is hypothesized that there will be significant effect of Harness Training with Earthing and Interval Training with Earthing on performance of Athletes.
5. It is hypothesized that there will be no significant difference between Harness Training and Interval Training with Earthing in altering selected physical, physiological and psychological variables among male Athletes.

SIGNIFICANCE OF THE STUDY

1. The investigation will be a basic knowledge to the sports scientists to envisage and conduct further research in Harness Training with Earthing and Interval Training with Earthing.
2. This study may help the coaches to provide more effective and time efficient workouts for their athletes.
3. This new concept can produce interesting information that may lead to Restructuring the training programme according to their requirement upon the demands.
4. This training will be one of the important training regimes to improve all round performance of Athletes.
5. This study will add to the knowledge in the area of sports training and sports performance.

6. The result of the study is useful to the teachers, coaches, trainers and the sports students those who are involved in different sports and games.
7. The ultimate goal of research in physical education is to help coaches and physical educators to train their athletes and players based on new concepts to improve their performance.

DELIMITATIONS

1. Only sixty (60) Male students will be selected.
2. All the subjects will be selected from Different Colleges in bangalore, karnataka and the age ranged from 18 to 24 years.
3. Minimum Intercollegiate level Athletes will be selected.
4. The students will be divided into three groups with the strength of 20 members in each group.
5. Only low intensity and moderate intensity will be used in this study.
6. The duration of the study will be restricted to 12 weeks and the number of sessions per week is confined to five.

LIMITATIONS

The following uncontrollable factors associated with the study will be accounted as the limitations of this study.

1. Only 18 to 24 years aged men athletes were included in the study, therefore, the results cannot be generalized to other population.
2. The researcher cannot control all outside activities like nutrition, supplements, physical activity and social habits of the participants.
3. The Quittance of physical fitness, lifestyle and Physiological stress and other factors that affect the metabolic function will be considered as a limitation.
4. The environmental conditions and levels of acclimatization will not be considered during the 12 weeks of training.

5. The previous experience of the participants in the field of sports and games were not considered which might be influencing on the training and data collection.

DEFINITION OF TERMS

Training

Training has been explained as a programme of exercises designed to improve the skills of sport and increase the energy capacities of an athlete for a particular sport. Matvey (1981) defined "sports training is the form of an athlete's training. It is the preparation systematically organized with the help of exercise which in fact that is pedagogically organized with the help of exercise process of controlling an athlete's development.

Physical fitness

"Physical fitness is not only one of the most important keys to a healthy body; it is the basis of dynamic and creative intellectual activity."**(John F. Kennedy)**

Speed

The maximal rate at which an individual is able to move the entire body over a specific distance is considered to be his speed movement **(Eckert, 1974).**

Cardio Respiratory Endurance

It is the ability to do sports movements, with the desired quality and speed, under conditions of fatigue.

Physiology

"Physiology is defined by dictionaries as 'the science of the normal functions and phenomena of living things. The physiology of animals emerged in Europe out of the Renaissance interest in the experimental method, as exemplified by the work" (**William Harvey's).**

Resting Heart Rate

"Heart rate is actually the frequency of pressure waves (per minute) propagated along the peripherally arteries" **(Astrand&Radahe, 1970)**

Breath Holding Time

Breath holding time is define as the duration of time through which one can hold his breath without the study of all living things. **(Laurence E. Morehouse and Augustus T.Miller, 1967)**

Sports competition Anxiety

Competition can cause athletes to react both physically (somatic) and mentally (cognitive) in a manner which can negatively affect their performance abilities. Stress, arousal and anxiety are terms used to describe this condition. The major problem in competition is letting your mind work against you rather than for you. You must accept anxiety symptoms as part and parcel of the competition experience; only then will anxiety begin to facilitate your performance.(*Sports competition anxiety,* n.d.)

Anxiety is a condition of persistent and uncontrollable nervousness, stress, and worry that is triggered by anticipation of future events, memories of past events, or ruminations. **(Jacob.K and Jacob.L)**

Self-Esteem

The term Self-Esteem has been something that most people experienced during their developmental process in a life time. Adolescence is a period in life which involves rapid changes that affect Self-Esteem, which lead to shifting expeditions, changing roles, and complex relationships (Block & Robins, 1993)

Performance of 100 Metres

Performance of 100 metres was measured by conducting the regular competition on 400 metres standard track and this performance of 100 metres was considered as performance variables for this study.

REVIEW OF RELATED LITERATURE

Paweł Sokal, Zbigniew Jastrzębski (2016) Direct contact with the earth or indirect contact with the earth via a metal conductor is known as earthing. Earthing removes potentials from the body and has an impact on physiological processes. We looked at how earthing affects glucose, lactate, and bilirubin levels during exercise and repose. 42 volunteers were divided into two groups based on their oxygen usage and earthed throughout exercise and recovery sessions in a double-blind, crossover study. In the first experiment, group A was earthed while group B was unearthed, and in the second experiment, the reverse was true. Individuals in group A weighed 77,1 pounds on average, while those in group B weighed 72,8 pounds on average. We saw a rise in glucose concentration after 15 minutes of activity, a decrease after 30 minutes, and a rise after 40 minutes of relaxation in the earthed group. We noticed a decline in glucose levels after 15 minutes of activity in unearthed participants, followed by a modest rise subsequently. The baseline concentration of bilirubin in group A (0,910,50) was greater after earthing (p=0,006) than in group B (0,550,22), while the difference was not significant (p=0,13) in group A (0,850,46) and group B (0,650,35) without earthing. In both exercise and rest, earthing caused an increase in bilirubin concentration in group A and a decrease in group B. As a functional dielectric, it appears that earthing influences erythrocyte metabolism and adapts it to a proper body mass level. Earthing during exercise aids the trained organism's mobilization of plasma glucose for muscle uptake and allows for more effective utilization of energy in energetic processes.

Stephen T. Sinatra, MD, FACC (2017) Many of the most disabling diseases, as well as the ageing process itself, are caused or associated with chronic inflammation and oxidative stress, according to modern biomedicine. As according new research, direct physical touch with the planet's surface produces a type of electric nourishment that has surprisingly powerful and immediate anti-inflammatory and antioxidant properties. The goal of this study was to show clinicians how grounding can be used as a simple strategy for preventing, treating, and enhancing patient outcomes. The purpose of the research presented here was to determine the physiological

and clinical importance of biological anchoring. More than 12 peer-reviewed studies were examined by the research team. Blinded studies in this study were accomplished by implementing a variety of methods where suitable. In all cases, the intervention used conductive bed sheets, floor or desk pads, and electrode patches similar to those used in electrocardiography to measure conductive contact between the Earth's surface and the study's participants. As a result of anchoring, all of the investigations described revealed substantial physiological or clinical outcomes. • The potential of grounding as a simple, natural, and accessible treatment therapy against the global epidemic of non communicable, degenerative, inflammatory-related diseases has been proven in this body of research. (Altern Ther Health Med. 2017)

Kevin Jeffers (2018) Mindfulness research has exploded in popularity in recent years. The majority of mindfulness research focuses on mindfulness's efficacy and benefits. As a result, a variety of mindfulness-based therapies have been created to address the rising number of health issues. Unfortunately, research has devalued the necessity of investigating alternative mindfulness methods. This study looked into whether earthing, as a complementary technique, may help the people are becoming more conscious. The Mindfulness Attention and Awareness Scale (MAAS), Toronto Mindfulness Scale (TMS), and Cognitive and Affective Mindfulness Scale-Revised were used to measure 30 participants before and after the study (CAMS-R). The subjects were randomly assigned to one of two groups: control or earthing, based on a coin toss. Within three weeks, participants conducted eighteen thirty-minute mindfulness sessions. According to A, earthing seems to have no measurable impact on mindfulness. Participants improved on mindfulness tests whether or not they were earthed, as per the findings. Three positive shared experiences of connectedness, healing, and enjoyment emerged from qualitative research. According to this study, a sample size of 70 people is required to show that earthing has a positive effect on mindfulness.

Florian Azad Engel (2018) In young and teenage athletes, high-intensity interval training (HIIT) provides a time-efficient alternative to moderate- or low-intensity continuous exercise for enhancing variables linked to endurance and anaerobic performance. This study comprised 24 studies with a total of 577 athletes (mean age: 15.5 2.2 years). Peak oxygen uptake (VO2peak), running performance, repeated sprint ability, jumping performance, and submaximal heart rate all had no or minor positive mean ES after HIIT. Despite the small mean ES for changes in VO2peak with HIIT (mean g = 0.100.28), the average increase in VO2peak from pre to post

HIIT sessions was 7.2 6.9% vs. 4.3 6.9% with any other alternative intervention. At various lactate or ventilatory-based thresholds, HIIT had a significant and favourable effect on running pace and oxygen usages sprint running ability. The mean ES for change-of-direction ability (big) was negative, and peak blood lactate concentrations were high (small). HIIT had a shorter mean training session duration than control interventions (28 15 min vs. 38 24 min). The current findings imply that young athletes who engage in high-intensity interval training (HIIT) can enhance a number of significant aerobic and anaerobic performance metrics. When compared to other training regimes, HIIT improved most variables related to endurance to a greater extent. HIIT, on the other hand, did not outperform the other training protocols in terms of ES. Young athletes, on the other hand, may benefit from HIIT because it requires less time per training session, allowing them to focus on sport-specific abilities.

Dhanaraj (2018) The goal of the study was to see how Harness training affected power metrics in thirty men. Subjects were chosen at random from the Alagappa University College of Physical Education in Karaikudi. The pupils were between the ages of 21 and 24. The subjects were divided into 2 groups. Group A was assigned to Harness training, whereas Group B served as the control group. For an eight-week period, the experimental group was subjected to training three times each week. Anaerobic power (kg/m/sec0), as evaluated by the Room or area Kalaman Anaerobic Power Test, and Leg strength (as measured by the Leg Dynamometer) have been the dependent variables (kg). Before and then after the training phase, data collected from each individual and statistically analysed utilising dependent 't' test and analysis of covariance (ANCOVA). It was found that there was a significant improvement on Harness training on Power parameters.

METHODOLOGY

SELECTION OF SUBJECTS

Sixty male athleteswill be selecting from different colleges in bangalore karnataka as the subjects. The total strength will be dividing into 3 different training groups of 20 athletes each.

SELECTION OF VARIABLES

The research scholar reviewed the available scientific literature, books, journals, periodicals magazines and research papers experts' opinion. Taking into consideration the feasibility criteria in terms of availability of instruments and relevance of the variables, the variables present study was identified

INDEPENDENT VARIABLES

1. Harness Training With Earthing
2. Interval Training With Earthing

DEPENDENT VARIABLES

1. **Physical Variables**

   Speed

   Cardio Respiratory Endurance

2. **Physiological Variables**

   Resting Pulse Rate

   Breath Holding Time

3. **Psychological Variables**

   Self-Esteem

   Anxiety

4. **Performance Variables**

   100 Mts Sprint

SELECTION OF TESTS

TABLE

No.	Criterion Variables	Test Items	Unit of Measurements
PHYSICAL VARIABLES			
1	Speed	30-YARD FLYING START	In Seconds
2	Cardiac Respiratory Endurance	Harvard Step Test	In Seconds
PHYSIOLOGICAL VARIABLES			
1	Resting Heart Rate	Radial Pulse Method	In Beats Per Minute
2	Breath Holding Time	Manual Nostril Clip Method	In Seconds
PSYCHOLOGICAL VARIABLES			
1	Self-Esteem	Rosenberg Self-Esteem Scale(RSES)	In Numbers
2	Anxiety	Sports competition anxiety test (SCAT) Questionnaire	In Numbers
PERFORMANCE VARIABLES			
1	Performance of 100Mts	100Mts Sprint Test on 400Mts Track	In Seconds

EXPERIMENTAL DESIGN

The study is formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n=60) are randomly assigned to three equal groups of twenty male athletes in each group. The groups are assigned as Experimental Group- I, Experimental Group-II and Group III as control group respectively. Experimental group I is assigned as Harness Training with Earthing and Experimental group II is assigned as Interval Training with Earthing and control group. The control group is not given any special treatment except of their routine warm up. Pre tests will be conducted for all the subjects on selected physical, physiological haematological and psychological variables. The experimental groups will participate in their respective training protocols for a period of 12 weeks. The post tests will be conducted on the above said dependent variables after completion of the experimental period of 12 weeks for all the three groups.

TRAINING PROCEDURE

The students will be dividing into three groups with the strength of 30 each. Harness Training with Earthing and Interval Training with Earthing will be practicing the groups under the supervision of investigator. The duration of the study will be restricted to 16 weeks and the number of sessions per week will be confined as five.

1. Experimental group I – Harness Training with Earthing
2. Experimental group II– Interval Training with Earthing
3. Control group III – No Training is given
4. Earthing : Barefoot walking in mud , grass and sand for 30 min

STATISTICAL ANALYSIS

Mean and standard deviation will be calculated for physical, physiological and psychological variables of each training group. And the data will be analyzed by using analysis of covariance (ANCOVA). Whenever the '*F'* value is found to be significant, Scheffe's test will be applied as post hoc test to determine the significant difference between the paired mean. The level of significance will be fixed at 0.05.

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